

# BRICK

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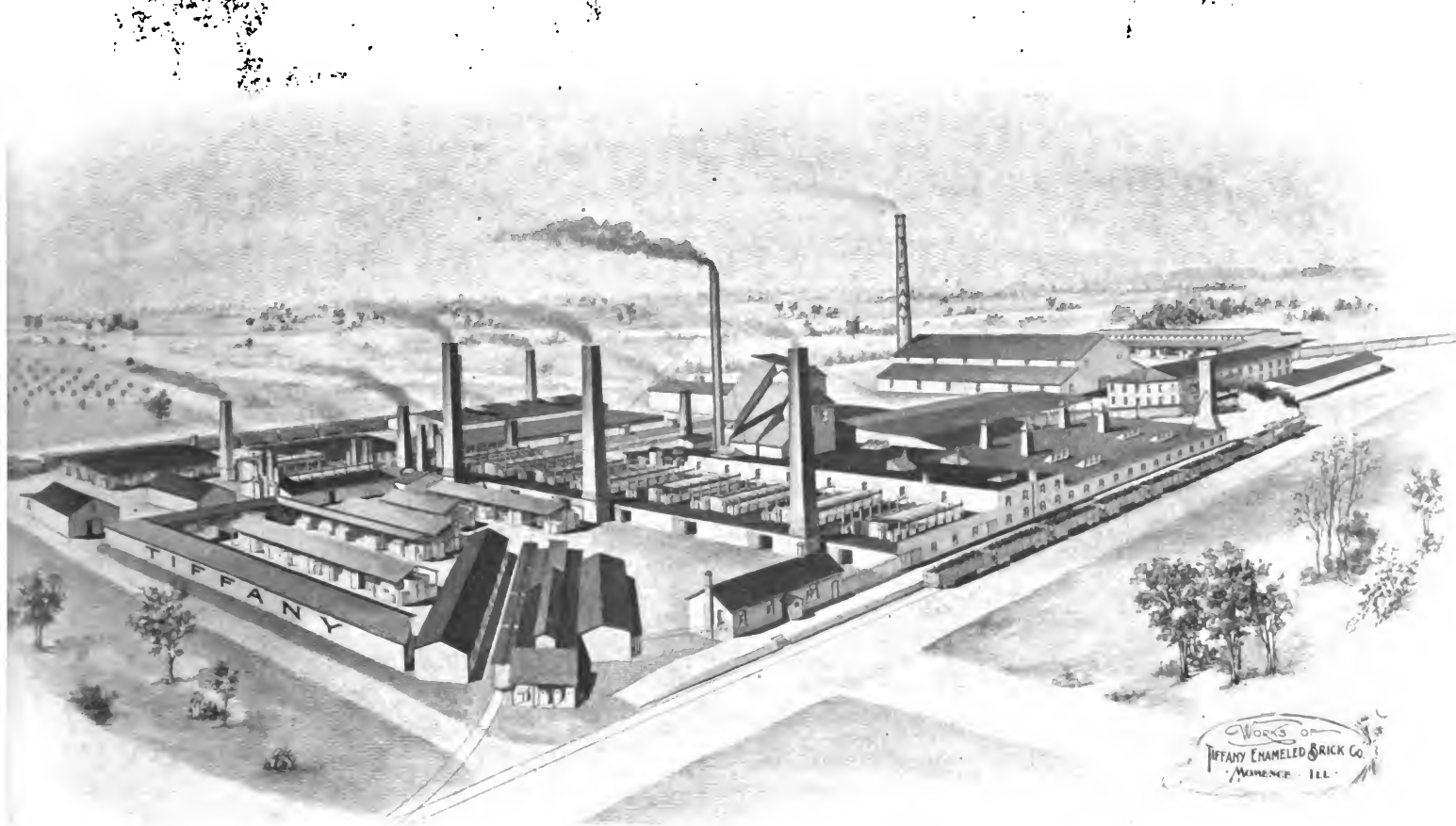
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## The Tiffany Enameled Brick Co., Momence, Ill.

The use of enameled brick has grown very largely during the last decade as has been evidenced by the many illustrations of public structures employing this product in past issues of "Brick." The Tiffany Enameled Brick Co., of Momence, Ill., is one of the most prominent institutions in this country and produces a very fine grade of product. The plant

Shore R. R. A switch from the Chicago & Eastern Illinois leads right into the plant, which is located  $1\frac{1}{2}$  miles from the town of Momence. The clay is stored in large sheds of ample capacity for all possible weather contingencies and after being weathered, is taken to the dry pans. These are two in number comprising one o ft. Frost pan and one Knowles pan, giving



THE TIFFANY ENAMELED BRICK WORKS, MOMENCE, ILL.

has been in operation a considerable time as in 1884 the Tiffany Pressed Brick Co. was incorporated, the products then being pressed brick and drain tile. Subsequently, however, enameled brick was produced after numerous experiments and in 1893 the early products were supplanted by the latter one, under the superintendency of Isaac Hardy.

The grounds owned by the company are of 40 acres in extent. The shipping facilities are excellent over the Chicago & Eastern Illinois and the I. I. I. branch of the Lake

raw material for 20,000 brick capacity daily. From the pans the clay is elevated to two stationary screens, proceeding from the screens to three Whittaker dry presses. There is also installed a Brewer stiff mud machine of 25,000 capacity which is a combined pugmill and brick machine. In addition to this there is one screw hand press.

The dry press bricks are taken from the machine to large steam driers, the pallets being taken from the cars and set in racks at the dry house. There are five of these driers, 100 x 24

ft. in length using exhaust steam by day and live steam at night.

The kiln equipment is extensive; there are 7 square and 5 round down-draft kilns, 3 small trial kilns, and one 12-chamber Youngren continuous kiln, 135 x 60 ft., which is a recent addition to the equipment of the plant. It is supplied with draft

age rooms for biscuit brick, one large clay storage building, ten storage stock sheds, a fine chemical laboratory and an office building. In addition to this there is a machine shop and repair shop containing a thoroughly modern equipment of lathes and drills from which all dies and the brick yard supplies are made. The cars used on the plant are of the company's own construc-



THE EAST ENAMELING ROOM.



VIEW OF A LARGE KILN.

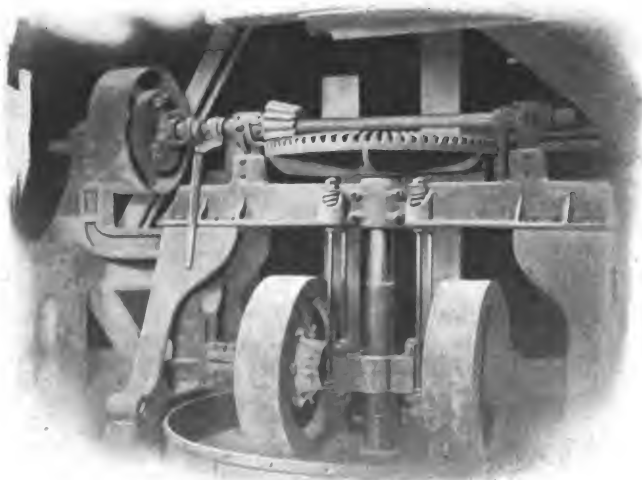
by a 110 ft. stack and the fuel is introduced at the sides of the kiln. The round kilns hold from 14,000 to 15,000 bricks each and the square kilns about 60,000. The Youngren chambers have a capacity each of 18,000 English sized bricks, 9 x 3 x 4½. Seven of the square kilns are used for biscuit brick and the remainder for the finished product. The brick in these kilns are fired as high as a temperature of 2,500 degrees F.

The power equipment comprises a 175 h. p. Phoenix engine,

tion. The kilns and the plant are so protected that the work can be carried on without interference all the year around. About 125 men are employed.

The officers of the company are: President and treasurer, J. Van Inwagen; vice president and manager, J. Van Inwagen, jr.; superintendent, E. Hardy, and assistant superintendent L. J. Tiffany.

E. Hardy, the superintendent, took the place of his father in



THE CLAY GRINDING MACHINERY.



BRICKS BEING SET IN KILN.

and four boilers, two horizontal and two up-right, all of Meadville, Pa., construction. The horizontal boilers are of 80 h. p. and the uprights of 20 h. p. There has just been installed a 150 h. p. internally-fired boiler.

The buildings of the plant are one large main building in which the bricks are made ready for biscuit kilns, three enameling rooms, one enameling storage room, one mixing room, three stor-

this position in 1899 and is a capable and thoughtful clay-worker, possessing sound judgment and an experimental pertinacity which is essential to success in all ceramic work. The company has recently placed at his disposal a fine laboratory, in which Mr. Hardy's investigations can be given full rein.

The name of Van Inwagen is well-known to the architects of the country for the Tiffany enameled brick are of wide distribu-



THE PRESS ROOM.



THE WEST ENAMELING ROOM.



THE OFFICE OF J. VAN INWAGEN, TIFFANY ENAMELED BRICK CO., MOMENCE, ILL.

tion and use. J. Van Inwagen is a man of great executive ability and to his efforts are due the successful overcoming of the early obstacles of the industry's history.

J. Van Inwagen, jr., the vice-president and manager, bears on his shoulders with ease the many burdens resultant from his position. Mr. Van Inwagen is a young man, not bound in any way by traditional practice, eager to embrace all devices calculated to improve the product of the plant and lessen the cost of production. His article on "Enameled Brick" which appears in another part of this issue, will give the reader an insight into his capacity as a thinker and will be read with interest by all.

The products of the plant are enameled brick and enameled tile for wainscoting. Satin (dull) finished enameled bricks are a specialty of the plant's production. The shipments extend over a very wide area, the Tiffany products finding their way to New York and San Francisco and from Minneapolis to New Orleans with equal facility. The fuel used in the plant is coal of varying qualities, all of which has been selected for its freedom from sulphur. The average time for manufacturing enameled brick is 10 weeks from start to finish.

The plant of the Tiffany Enameled Brick Co. has long been a source of pride to the inhabitants of Momence and contributes no small measure of prosperity to this small and charming town. The main offices of the plant were in 1902 removed from Chicago to Momence.

### Salt Glazed Brick Making.

BY TYKE.

In the discussion of this subject it is as well for the reader to understand that I am dealing with the well-known Wortley fireclay found at Leeds, Eng. The manufacture of salt glazed brick demands the best of clay. Even in Leeds the clay varies considerably and there are companies that purchase clay from other parts of England with which to make their bodies. Of course, it is possible to make salt glazed brick without the use of any body, but to obtain the best results the brick should be dipped twice to get a good face.

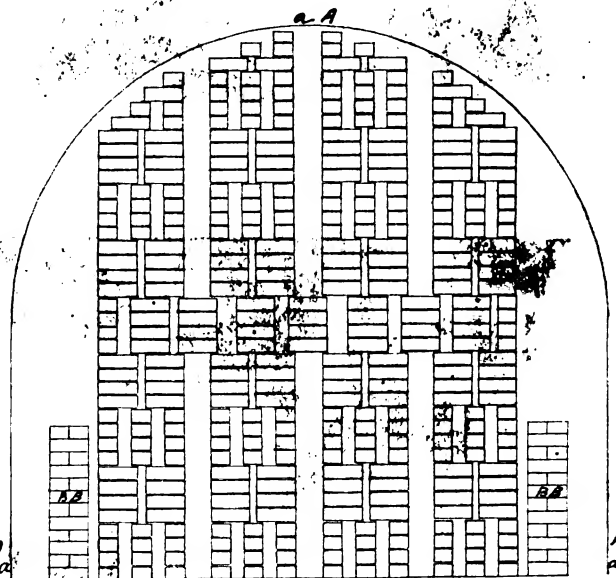
Dealing with the body first the cleanest fire clay is obtained and passed through a perforated pan. Then 18 parts of clay are taken to three parts of soft Cornwall stone, and these are put into a mill or blunger. Water is added and the grinding is carried on for two or three days, after which the resultant mixture is sieved through a No. 50 brass wire sieve into a trough. This trough is built of brick and lined inside with glazed bricks. The mixture is sifted twice more; first through an 80-mesh and next through a 100 or 120-mesh screen. The mixture is allowed to stand from 7 to 10 days and if it is then too thin the water is drawn off. This mixture makes a splendid body with perfect dipping properties.

When the body is ready the press is started. On our works we use Titley's patent hand repress. It is one that does a lot of work with very little expense. We have one steam press to press the first time and then the bricks are allowed to stand for 24 hours, when they are repressed in the small hand presses. By this means with the steam press one day ahead three hand presses are kept going without cessation.

For the making of salt glazed brick the bricks are brushed with a soft brush to take the oil off the face. Another brush dipped in the body is passed over it so that the dipping will be more uniform. For the first dip the body coat must weigh about 26 oz. to the pint. After the bricks are dipped they are put onto shelves or on the floor to dry and must be carefully

watched, for as soon as the hand can be passed lightly over the face without rubbing the body up the second dip must be applied. This second dip should weigh 27½ oz. to the pint. Both these dips are the same body, but the second dip is a little thicker. If the brick are allowed to get too dry before the application of the second coat this second coat will rise in blisters. If these are not too big the rubbing of the face with a table knife will cause them to go down, but prevention is better than cure. If you put them on shelves the two bottom rows ought to be dipped long before the others, owing to the heat from the floor. It is a good plan if the bricks get too hard after the first dip to let them go for common salts rather than dip them again and spoil them altogether.

I will now give a short description of the best way for setting salt glazed bricks. My sketch shows a common down-draft



SETTING SALT GLAZED BRICK.

kiln, than which there is none better for the purpose. There is a small space between each brick and in that space are six small pieces of clay rolled in flint to prevent the bricks from sticking together, for if that happened a white edge would be shown around each brick. No less than six pieces should be put between the bricks or else they will bend or twist. The pieces allow the salt to do its work better. The bricks are suitable for a damp course and for walling also. If the brick is glazed all around the panels no water can find ingress, but if the bricks were set quite close to one another then they would come out white on the two flat sides.

A brick and tile factory will shortly be erected at Washington, Ia., at a cost of \$15,000.

The Perham brickyard, Northfield, Minn., turned out 2,000,000 brick during the last season. The brick are cream color and have a large sale through northern Minnesota and North Dakota.

The Oklahoma Brick Co., Oklahoma City, Okla., recently elected the following officers: President, G. Sohlberg; vice-president, U. L. Russell; J. L. Wilkin, treasurer; L. F. Lee, secretary. The company has decided to enlarge the plant in the near future.